STATE OF WASHINGTON
DEPARTMENT OF AGRICULTURE
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CASE INSPECTION REPORT

WSDA -vs- Aquatechnex

Case Number: T049-2004 Inspector/Investigator: Paul F. Figueroa

I. INTRODUCTION/LOCATION

The WSDA conducted two Non-agricultural Use inspections for aquatic pesticide applications made for the Washington State Department of General Administration (GA) by Aquatechnex (Terry McNabb, owner/commercial applicator) on 7/19/04 and 7/29/04. These routine inspections examined the pesticide application records, pesticide transportation, storage, disposal, safety equipment available and employed by handlers, application equipment, business and applicator licensing, the actual applications, and adherence to the label directions. In addition, the inspection inspected the posting, notification, and elements relevant to the aquatic permit issued to GA and Aquatechnex by the WSDA. This case report details elements of both inspections.

II. PARTIES INVOLVED

Inspector:
WSDA
Pesticide Compliance Program
PO Box 42560
Olympia WA 98504-2560
(360) 902-2040

Pesticide Applicator:
Mr. Terry McNabb
Aquatechnex
PO Box 118
Centralia WA 98531
(360) 330-0152

III. EVIDENCE OBTAINED

A. Inspection

Site Review:
The Washington State Department of General Administration (GA) contracted with Terry McNabb (owner/commercial applicator of Aquatechnex) to make herbicide applications to control Eurasian Watermilfoil in Capitol Lake in Olympia, WA (**attachment 1**) [**photos 386, 296, 297, 298, 532, 474, 475, 478, 350, P618**]. The GA contract required the applicator to take all necessary steps to acquire the appropriate aquatic application permit (**attachment 2**), which would have to be issued under the WSDA Aquatic Noxious Weed Control National Pollutant Discharge Elimination System (NPDES) Waste Water Discharge General Permit number 993000 (**attachment 3**). The contract called for staggered applications to occur on 7/19/04 and 7/29/04 (as amended to conform with the herbicide label directions). The GA contract indicated Capitol Lake Dam and its fish ladder would be closed for 2-3 days post treatment. That activity would be coordinated by the GA Program Manager. The contract called for a maximum application rate of 2.5 parts per million (ppm) triclopyr applied as a submerged herbicide application using weighted trailing hose in order to facilitate maximum herbicide contact with the submerged plants.

Capitol Lake and the adjacent terrestrial lands, are owned and/or administrated by GA. It has three main water bodies identified as the south basin, mid-basin (including ponds 1 & 2 and Percival Cove), and the north-basin (**attachment 4**). The total lake surface area (south of the 5th Street Dam) is estimated to be approximately 260 acres. Mr. David Schilperoot (Senior Facilities Planner, Capitol Lake Project Manager) provided the following lake statistics:

Site	Surface Acres	Average Depth
North-basin	100	10.0 ft.
Mid-basin	130	-
Main	-	4.5 ft.
Percival Cove	-	7.5 ft.
Ponds 1&2	-	2.75 ft.
South-basin	30	n/a
Total lake area	260	-

The WSDA noted the lake had dead Stickleback fish washed up around the shores [**photos 303, 306, 479**].GA indicated this was an annual event where the Stickleback died in large quantities on Capitol Lake. They indicated these events were related to environmental and/or biological issues.

Label Review:

Renovate 3 (SePRO, EPA Reg. No. 62719-37-67690, 44.4% triclopyr): It is a state restricted use pesticide for its uses on or in water. It is a selective broadleaf and woody vegetation control herbicide. It has uses for control of vegetation in aquatic sites for emersed, submersed and floating aquatic plants in ponds, lakes, reservoirs, non-irrigation canals, marshes and wetlands. The label states, "Caution" "Keep out of the reach of children" "It is a violation of Federal law to use this product in any manner inconsistent with its labeling." The label indicates the product is corrosive, causes irreversible eye damage, and is harmful if swallowed, prolonged or frequent skin contact may cause allergic reaction in some individuals. Personal protection equipment includes long sleeved shirt and long pants, shoes plus socks, protective eyewear, chemical resistant gloves.

The label states, [If it was used for agricultural uses] "Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forest, nurseries, and greenhouses, and handlers of agricultural pesticides." "Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 48 hours." Under environmental hazards the label indicates, decaying plants may deplete oxygen, which may contribute to fish suffocation "... to minimize this hazard, do not treat more than one-third to one-half of the water area in a single operation and wait at least 10 to 14 days between treatments.

For control of floating or emerged weeds, such as waterhyacinth and alligatorweed apply 2 to 8 quarts per acre of Renovate 3. Surface application is done with a boom or handgun using 20 to 200 gallons per acre of spray solution. The label states, "There are no restrictions on use of water in the treatment area for recreational purposes, including swimming and fishing... There are no restrictions on livestock consumption of water from the treated area." For control of submerged weeds, such as Eurasian watermilfoil in lakes, ponds, reservoirs, and non-irrigation canals or ditches that have little or no continuous outflow, apply Renovate 3 as either a surface or subsurface application.

The rates of application for subsurface treatments range between 0.75 and 2.5 ppm with a maximum annual level of 2.5 ppm. Maximum application to achieve 2.5 ppm is dependant upon the water depth. The label indicates a water body with an average depth of 1 ft. would have a maximum application rate of 2.3 gallons per surface acre (see page 6 of label). A water body with a depth of 4 ft. would have a maximum application rate of 9.1 gallons per surface acre, and a water body with a depth of 20 ft. would have a maximum application rate of 45.3 gallons per surface acre in order to achieve 2.5 ppm (**attachment 5**).

B. Non-ag Use Inspection 7/19/04, initial application

Aquatechnex utilized 5 employees for application and logistics including a representative from SePRO chemical corporation (Mr. Scott Shuler). The commercial applicator and his operators were licensed and had aquatic endorsements. The commercial applicator license file indicated it was complete and their business license FRIC was up to date (**attachment 6**).

The herbicide Renovate 3 was delivered to a GA secure site from SePRO. The containers were TranStore brand stainless steel 350-gallon capacity returnable totes. Herbicide was loaded into the spray tank through the following closed-system: quick disconnect attached to the tote; line to an electric pump; pump stationed in a closed bottom containment box; line pumped out from electric pump to battery powered Sotera brand metering nozzle; nozzle metered herbicide into apparatus tank. Empty pesticide containers were sealed. SePRO trucked sealed empty containers back to their factory for further processing [**photos 299, 301, 322, 315, 317**].

At the batching site, there was a spill kit available along with first aid equipment and an eyewash station. Personal Protection Equipment (PPE) included: long-sleeved shirt and pants, shoes plus socks, protective eyewear, and chemical resistant gloves. During the process of handling the loading equipment, loading chemical, and application, persons involved wore all PPE required by the label, for the conditions or situation they were involved [**photos 314, 318, 341**].

It was noted the applicator driving the airboat, at times, did not wear gloves and protective eyewear during all of the application [**photos 328, 334**]. Since the application equipment was a closed system and the nozzles were under water at all times during the application, the applicator was not be required to have all PPE during those times. The inspector watched all applications from varying locations, including from another boat on the lake and from points along the shore. It was noted that on every occasion where the applicator was seen handling nozzles, the apparatus, or the main storage tank, the applicator put on his goggles and gloves prior to handling such equipment. The inspector noted the applicator had appropriate PPE while loading or handling pesticide containers and equipment.

Aquatechnex employed two separate application apparatus for this application. One was an Air Ranger brand airboat with a 50-gallon capacity Spotlyte brand sprayer powered by an electric motor. It appeared to be maintained in a manner that was clean, orderly, and serviced. It had their WSDA license plate affixed (C137) to the apparatus [**photo 316**]. Their second boat was a 10-12ft. double-ended rowboat equipped with a small electric motor. This was used to apply herbicide into the two small ponds adjacent to the mid-basin. That boat had a 20-gallon tank Spotlyte brand sprayer powered by an electric motor. Aquatechnex had been issued a WSDA license plate for that apparatus (C139) but that plate was not affixed to either the boat or apparatus [**photos 368, 382**].

The application equipment included a boom with weighted nozzles that would direct the pesticide to the area at or near the lake bottom area [**photo 341**]. No pesticides were applied above ground or above the water. Aquatechnex employed a GPS unit with pre-programmed waypoints to direct the application swaths into the target area with the targeted pesticide volume [**photos 328, 334**]. Application from the small boat was similar but without a GPS unit. Prior to

the pesticide applications, Aquatechnex staff posted signs at the boat ramps and at 80-120 ft. intervals along the shore. Signs faced both the lake and shore [**photos 378, 379, 353, 354, 365**]. Several signs were either knocked over or fell over. Aquatechnex was asked to evaluate its posting methods to eliminate reoccurrence.

The herbicide used for this treatment was Renovate 3, EPA Reg. number 62719-37-67690. It is registered for uses in aquatic sites and weeds, such as submerged Eurasian water milfoil targeted in Capitol Lake. A review of the pesticide application records for the 7/19/04 Capitol Lake aquatic application indicated the following:

Mid-basin:
622 gallons of Renovate 3 was applied to 95 acres of the mid-basin,
average depth was 4.5 ft.,
maximum application rate of 2.5 ppm for submerged aquatic weeds would be equivalent to a maximum labeled rate of 10.18 gallons per surface acre,
the actual application rate to this basin equated to 6.55 gallons per surface acre,
the application rate was lower than the maximum-labeled rate allowed for submerged aquatic weeds.

Ponds 1&2 at Mid-basin:
15 gallons Renovate applied to 4 acres of ponds adjacent to the mid-basin area.
average depth was 2.75 ft.,
maximum application rate of 2.5 ppm for submerged aquatic weeds would be equivalent to a maximum labeled rate of 6.22 gallons per surface acre,
the actual application rate to these ponds equated to 3.75 gallons per surface acre,
the application rate was lower than the maximum-labeled rate allowed for submerged aquatic weeds.

Percival Cove:
36 gallons applied to 7 acres,
average depth was 7.5 ft.,
maximum application rate of 2.5 ppm for submerged aquatic weeds would be equivalent to a maximum labeled rate of 16.97 gallons per surface acre,
the actual application to these ponds equated to 5.14 gallons per surface acre,
the application rate was lower than the maximum-labeled rate allowed for submerged aquatic weeds.

On 7/19/04, a total of 106 acres was treated with Renovate 3. The total size of Capitol Lake is 260 acres. The application on this date equates to treating 41% of the lake.

Summary for the 7/19/04 inspection:
Aquatechnex applied the appropriate amount of herbicide to the lake areas treated. Application rates were less than the label maximum for submerged aquatic weeds. They treated 41% of the total lake. Applicators were properly licensed. Signs were placed by the applicator prior to the application. All appropriate PPE was used for the activities performed. Pesticide application records were complete (**attachment 7**). The applicator failed to have placed the appropriate

apparatus plate on the second boat. Other than that one technical violation, no other problems or violative acts were found during the inspection.

C. Non-ag Use Inspection 7/29/04, second application

Aquatechnex had one boat applying herbicides on Capitol Lake using 5 employees to assist with logistics [**attachment 8**]. As per the previous inspection, the business, applicator and operators were properly licensed. They used the Air Ranger brand airboat with a 50-gallon tank capacity Spotlyte brand sprayer powered by an electric motor. It had their WSDA license plate affixed (C137) to the apparatus. The application equipment included a boom with weighted nozzles that would direct the pesticide to the afea at or near the lake bottom area. No pesticides were applied above ground or above the water. They again used the herbicide Renovate 3, EPA Reg. number 62719-37-67690. It is registered for uses in aquatic sites and weeds, such as submerged Eurasian water milfoil targeted in Capitol Lake. Prior to the pesticide applications, Aquatechnex staff posted signs at the boat ramps and at 80-120 ft. intervals along the shore. Signs faced both the lake and shore [**photos 491, 492, 493**].

The Renovate 3 was delivered to a secure GA site from SePRO. The containers were TranStore brand stainless steel 350-gallon returnable totes. Loading the herbicide to the spray tank was done in the same closed-system as with the previous application. The batch site had a spill kit available along with first aid equipment and an eyewash station [**photos 466, 463, 481, 483**].

The Washington State Patrol provided security to limit public access to the mixing/loading/batching site. They also temporarily closed the walking trail at the railroad trestle from public use during the application [**photos 493, 485, 498**].

PPE included: long-sleeved shirt and pants, shoes plus socks, protective eyewear, and chemical resistant gloves. During the process of handling the loading equipment, loading chemical, and application, persons involved wore all PPE required by the label, for the conditions or situation they were involved [**photos 500, 501**].

It was noted the applicator driving the airboat, at times, did not wear gloves and protective eyewear during all of the application. Since the application equipment was a closed system and the nozzles were under water at all times during the application, the applicator was not required to have all PPE during those times. The inspector watched all applications from varying locations, including from another boat on the lake and from points along the shore. It was noted that on every occasion where the applicator was seen handling nozzles, the apparatus, or the main storage tank, the applicator put on his goggles and gloves prior to handling such equipment. The inspector noted the applicator had appropriate PPE while loading or handling pesticide containers and equipment [**photos 509**].

The herbicide used for this treatment was Renovate 3, EPA Reg. number 62719-37-67690. It is registered for uses in aquatic sites and weeds, such as submerged Eurasian water milfoil targeted in Capitol Lake. A review of the pesticide application records for the 7/29/04 Capitol Lake aquatic application indicated the following:

North-basin:
500 gallons of Renovate 3 was applied to 65 acres,
average depth was 10.0 ft.,
maximum application rate of 2.5 ppm for submerged aquatic weeds would be equivalent to a maximum labeled rate of 22.63 gallons per surface acre,
the actual application to these ponds equated to 7.69 gallons per surface acre,
the application rate was lower than the maximum-labeled rate allowed for submerged aquatic weeds.

A total of 65 acres were treated where Capitol Lake is 260 acres equates to 25% of the lake were treated on this date.

Other Issues:

During the beginning of the herbicide application, the WSDA noted the 5th Street bridge dam appeared to have more water flowing out of the lake than expected [**photos 527**]. The WSDA immediately contacted Ecology, GA, the GA Zone 7 Manager with responsibility for the dam (Mr. Larry Kessel), and Aquatechnex. Based on information provided by Mr. Kessel after inspection of the dam, it appeared one of the 3 gates was closed only to 97% of maximum, while the other two were 100% closed. The partially open dam gate was subsequently closed. During this period while one gate was 3% open, the inspector noted the herbicide application that had been taking place during this time was approximately 1,000 ft. distance in the area of Marathon Park and the railroad trestle (**attachment 9**). After Aquatechnex was informed of the partially open dam, they made an inspection of the aquatic weeds around and near the dam shortly after GA closed the partially open gate on the dam. Aquatechnex determined there were very few weeds growing around the dam area. They chose to leave a 300 ft. non-treated buffer in an arc around the dam gates. The WSDA collected water samples on the Budd Inlet side of the 5th Street dam following the completion of the herbicide application.

The WSDA water samples indicated 0.061-ppm triclopyr. Information provided by GA indicated the fish ladder at the dam gates could not be completely closed. As such, there would be incidental water flowing from the lake into Budd Inlet. The inspection noted the applicator did not make a direct application within 300 ft. of the dam or to any areas outside Capitol Lake. The amount of water flowing out of the lake through the fish ladder was considered to be 'little continuous flow' [**photos 538, 539, 552, 553**] and not a violation of the Renovate label.

Summary for the 7/29/04 inspection:
Aquatechnex applied the appropriate amount of herbicide to the lake areas treated. Application rates were less than the label maximum for submerged aquatic weeds. They treated 25% of the total lake. Applicators were properly licensed. Signs were placed by the applicator prior to the application. All appropriate PPE was used for the activities performed. Pesticide application records were complete (**attachment 10**). There were no violative acts noted at the 7/29/04 application.

D. Licensing Records:
Aquatechnex is a licensed commercial pesticide application business. The business application records and business insurance is correct and up to date. Mr. Terry McNabb is the licensed application (#7973) having an aquatic endorsement (Q). Mr. Chris Clinton is a licensed commercial operator (#62749) having an aquatic endorsement (**attachment 11**).

E. WSDA Residue Sampling

The WSDA collected water samples following the completion of the 7/29/04. Two samples were collected. Sample #4971 was a 1-liter water sample and sample #4972 was a 4-liter water sample. Both samples were taken just below the 5th Street dam on the Budd Inlet side at the end of the west concrete abutment. Samples were sent to the WSDA Plant Protection Program's laboratory in Yakima. At the lab, both samples were combined to test for residues of triclopyr.

Results of these samples are as follows (**attachment 12**):

Chemical	Media	Sample	Results
triclopyr	water	4971, 4972	0.061 ppm @ MDL 0.001 ppm

This level of triclopyr residue was determined not to be a violation of the pesticide label.

F. Thurston County Health Residue Sampling

Ms. Sue Davis with Thurston County Environmental Health Division (2000 Lakeridge Drive SW, Olympia, WA 98502) collected pre- and post-application water samples from various points in and out of the treatment areas (**attachment 13**). Water samples taken on 7/13/04 indicted no detectible levels of triclopyr in the sampled areas. Samples collected on 7/19/04, after the first application indicated all levels were below the maximum label rate of 2.5 ppm. Samples collected on 7/29/04, after the second application indicated all levels were below the maximum label rate of 2.5 ppm also. Samples collected at the 5th Avenue Bridge on 7/29/04 indicated triclopyr levels at 0.065 ppm, which was similar to the WSDA triclopyr residue level. The levels of triclopyr residues were determined not to be a violation of the pesticide label by the WSDA.

G. Past Complaints/Citations

Review of the case tracking system indicates one previous Notice of Correction on record for Aquatechnex under case T076-2003 on 8/28/03. In that case, Mr. McNabb failed to provide pesticide application records to the WSDA in a timely manner. It is not related to the elements in this case.

III. SUMMARY FINDINGS

According to the inspection and records review, there was sufficient evidence to substantiate that Mr. Terry McNabb, as the commercial applicator for Aquatechnex or employees acting under his direction, apparently did the following:

Operated a pesticide apparatus that failed to have its WSDA apparatus plate affixed to the equipment or its carrier.

No other violative acts were noted on either the 7/19/04 or 7/29/04 applications.

Investigator Recommendations:

Based on that one deficiency, a Notice of Corrections should be issued to Mr. Terry McNabb for the apparent violation of the following:

RCW 17.21.290, WAC 16-228-1555: failing to have or place a WSDA pesticide apparatus plate on the equipment.
Unlawful act(s): RCW 17.21.150(9), WAC 16-228-1500(1)(j).

IV. ATTACHMENTS

Attachment # 1: Washington State Department of General Administration Request for Proposal to control Eurasian Watermilfoil in Capital Lake, contract number 06304.
Attachment # 2: WSDA Non-agricultural Use inspection, 7/19/04.
Attachment # 3: WSDA Aquatic Noxious Weed Control NPDES Waste Discharge General Permit number 993000.
Attachment # 4: Generalize map of Capitol Lake.
Attachment # 5: SePRO Renovate 3 herbicide label.
Attachment # 6: WSDA Non-agricultural Use inspection, 7/19/04.
Attachment # 7: Aquatechnex pesticide application records, 7/19/04.
Attachment # 8: WSDA Non-agricultural Use inspection, 7/29/04.
Attachment # 9: Generalize map of Capitol Lake for the 7/29/04 application.
Attachment # 10: Aquatechnex pesticide application records, 7/29/04.
Attachment # 11: Commercial applicator renewal application, Aquatechnex.
Attachment # 12: WSDA Chemist Report Residue Analysis for samples 4971 and 4972.
Attachment # 13: Thurston County Health Residue Analysis summary for water samples collected on Capitol Lake between 7/13/04 and 8/12/04.